

REMARKS UNDER 37 C.F.R. 1.111

Reconsideration and allowance are respectfully requested.

The Examiner states that claims 1-18 and 20-56 are pending and being examined in this case. Non-elected claims 23-52 have been withdrawn from consideration (see paragraphs 1-2, page 2 of the office action). Claims 23-52 have been cancelled in this response, without prejudice.

Applicant appreciates the allowance of claim 1. Claim 1 has not been rejected in the office action over any reference and therefore is allowed.

The amendments proposed in this response removes the double inclusion of a component in claim 8 and writes claim 53 in amended independent form because claim 30 has been cancelled. No new matter has been added. Entry and allowance are requested.

Claims 2-18, 20-22, and 53-56 are patentable under 35 U.S.C. 112, second paragraph.

Firstly, the Examiner's rejection on pages 2-3 mutually contradicts the Examiner's similar rejection in the paragraph spanning pages 3-4. In the former, the Examiner contends that Applicant's claims essentially, "ipso facto," define two steps. In the latter rejection the Examiner contends there are four steps in Applicant's claims. If the Examiner's former contention is indeed correct then the latter contention should be wrong and vice versa. Therefore, withdrawal of one of the two rejections is respectfully requested.

Regarding the rejection of the claims on pages 2-3, the

Examiner questions whether there are indeed as many steps as identified under numbered paragraphs (a) through (f) in the pending claims. The Examiner's arbitrary dismissal of the interim inventive steps as being merely an "ipso facto" occurrence of the Applicant's carrying out the other steps is in error. The Examiner acknowledges Applicant's application of the substances on wood which results in the unique interaction of the substances after their application and thereby results in a uniquely treated wood product. But for Applicant's claimed invention, there would be no "result of penetrating the wood with the two solutions" as pointed out by the Examiner.

Also, the Examiner questions the use of "sequentially." The ordinary dictionary meaning of that term applies. Again, but for the method of practicing the claimed invention there would not occur the unique interaction between the first and second formulations and the wood after applying the formulations to the wood substrate. The Examiner's explanation on pages 2-3 make the claims definite and adequate to understand the subject matter which applicant regards as the invention.

Thus, present claims are definite and non-ambiguous. The claims particularly point out and distinctly claim the subject matter of the invention. Withdrawal of the 35 U.S.C. 112, second paragraph rejections are respectfully requested.

Claims 2, 4-7, 10, 11, 13, 17, 18, 20-22, and 53-55 are patentable under 35 U.S.C. 102(b) over Dombay (US 3,554,785).

Dombay merely coats wood with an oxidizing agent to lighten

the wood. Dombay uses ammonium persulfate, and cupric sulfate as accelerant in concentrated hydrochloric acid with a methylated spirit, and an organic solvent teepol. In some cases Dombay treats some woods with an A solution to produce a darkening effect, and some woods with a B solution to produce a lightening effect. Whatever the result of Dombay, it is clear that Dombay does not teach the present invention as specifically pointed out in the claims.

Dombay relates to wood bleaching in which the reference mandates the use of methylated spirit, which the present invention particularly avoids. The present specification describes the ill-effects of prior art procedures that mandate alcohol based substances which harm the environment. In fact, Example 4, relied on by the Examiner, provides for 150 ml of methylated spirit. Potassium permanganate and cupric sulphate are used as bleaching accelerant in the one-step Dombay bleaching process. Acetic acid is used to stop the bleaching.

Nothing in the entire reference teaches or suggests the uniquely claimed invention that has an aqueous solution of a mineral salt and an aqueous solution of a peroxide, with the mineral salt solution being applied prior to the peroxide solution and the in situ reaction of the applied substances with the substrate. Therefore, Dombay cannot anticipate the present invention.

Claims 2, 4, 5, 6, 10, 11, 13, 17, 18, 20, and 53-55 are patentable under 35 U.S.C. 102(b) over Matsushita (JP 60-250906).

Matsushita relates to colored woods manufactured by impregnating woods with reactive coloring solutions and with dye solutions and synthetic resins and color coatings. The present specification clearly points out the disadvantages of prior art staining systems, such as Matsushita, and provides for a unique coloring system that allows substances to be applied to the wood that react in situ resulting in automatic coloring of the substrate because of the reaction.

The claimed invention does not relate to coloring the substrate by applying a dye or a synthetic resin or coloring solutions. Matsushita thus teaches away from the claimed invention and cannot anticipate the present claims.

Claims 2, 4-7, 10-22, and 53-56 are patentable under 35 U.S.C. 102(b) over Bures (CS 145495).

Bures relates to a three step process of treating woods with metal salts, oxidants, dyes and permeation agents. However, the reference does not teach nor suggest treating and coloring a wood substrate, comprising a first component for a first application to the wood substrate, and a second component for a sequential application to the wood substrate.

Bures has nothing to do with the aqueous solution preparations being adapted to sequentially penetrate the wood substrate when sequentially applied, and both aqueous solution preparations when applied sequentially in effective amounts, being adapted to react with each other within the wood substrate to impart physical color characteristic to the wood substrate.

Therefore, Bures does not describe, teach nor suggest the claimed features, and cannot anticipate the claimed invention.

Claims 3 and 9 are patentable under 35 U.S.C. 103(a) over Dombay, Bures, or Matsushita and Armstrong (US 5,242,464).

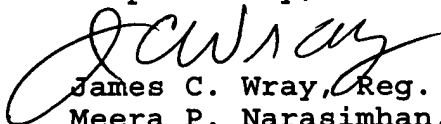
Each of Dombay, Bures, and Matsushita, as previously discussed do not describe, teach or suggest the claimed invention. Therefore, any further combination with other references will also lead away.

Armstrong expressly teaches away from the claimed invention by mandating that the wood bleach be applied in excess "to maintain an excess of liquid on the surface of wood for an extended time." It is not understood how maintaining the liquid on a surface can be the same as penetrating the wood as uniquely claimed and also acknowledged by the Examiner on pages 2-3.

Armstrong expressly requires moving the surface liquid so that it does not penetrate. That leads away from the present claims. Therefore, with or without the other references, Armstrong cannot render the present claims obvious.

Since Applicant has presented a novel, unique and non-obvious invention, reconsideration and allowance are respectfully requested.

Respectfully,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Kindly cancel non-elected claims 23-52 without prejudice.

Kindly amend claims 8 and 53 as follows:

8. (Amended) A method for treating a wood substrate comprising the steps of:

(a) contacting a surface of a wood substrate with a first formulation comprising a metal salt and a solvent,

(b) penetrating the surface of the wood substrate with an effective amount of the first formulation to penetrate the wood substrate, and sequentially

(c) contacting the wood substrate with a second formulation comprising an oxidizing agent and a solvent,

(d) penetrating the surface of the wood substrate with an effective amount of the second formulation, thereby reacting the first and second formulations with each other in contact with the wood substrate, and imparting a stable change to the characteristics of the wood substrate,

wherein the metal salt is selected from the group consisting of molybdenum (VI) oxide, zinc sulfate, copper (II) chloride, nickel perchlorate, nickel sulfate, [copper (II) chloride,] nickel perchlorate, nickel sulfate, copper (II) perchlorate, tin (II) sulfate, tin (I) chloride, chromium (III) sulfate, aluminum sulfate, cerium (III) perchlorate, zinc peroxide, titanium hydride, chromium (III) perchlorate, manganese (II) chloride,

aluminum chloride, titanium (IV) chloride, silver chloride, and titanium (II) sulfate, and combinations.

53. (Amended) Treating and coloring a wood substrate with [the kit of claim 30,] a kit comprising

(a) a first formulation of a metal salt and a solvent,

(b) a second formulation of an oxidizing agent and a solvent; and

(c) instructions for sequentially applying the first and the second or the second and the first formulations for penetrating the wood substrate when applied, and both formulations, when applied sequentially in effective amounts, reacting with each other in situ and imparting a changed fixed physical characteristic to the wood substrate, and

the treating and coloring comprising the steps of:

(a) contacting the wood substrate with the first component solution preparation comprising the oxidizable metal salt, and allowing an effective amount of the first component solution preparation to penetrate the wood substrate, and sequentially,

(b) contacting the wood substrate with the second component solution preparation comprising an oxidizing agent, and allowing an effective amount of the second component solution preparation to penetrate the wood substrate, thereby

reacting in situ within the wood substrate the first and the second component solution preparations with each other in contact with the wood substrate, and

imparting a stable color change to color characteristics of

the wood substrate.